REMARKS

By this Amendment, claims 1, 5-6, and 8-14 are amended and new claim 15 is added. Accordingly, claims 1-15 are pending in this application. No new matter is presented in this Amendment. Reconsideration and allowance of the subject application in view of the foregoing amendments and the following remarks is respectfully requested.

The Patent and Trademark Office (PTO) rejects claims 1-5, 9-12 and 14 as being anticipate by Johnson ("A Semantic Lexocon for Medical language Processing" JAMIA 1999) and further rejects claim 13 as being obvious over Johnson in view of U.S. Patent No. 6,584,470 to Veale. Applicants gratefully acknowledge the indication that claims 6-8 contain allowable subject matter. However, Applicants respectfully traverse these rejections.

Johnson discloses a semantic lexicon for medical language processing, and Veal discloses a system for named entity extraction for answering natural language questions (see Abstract).

Regarding amended claim 1, Applicants respectfully submit that Johnson fails to disclose a rule collection unit configured to generate rules used to recognize the named entity. Johnson, on the other hand, appears to discloses a method of constructing a special dictionary using rules designed to minimize the occurrence of multiple-semantic types by creating rules to diminish "multiple-semantic type" (See Page 211 and 213). Johnson appears to use contextual information to determine whether both semantic types can be assigned to some of the lexemes in the list or whether one type is consistently preferred to the other. Furthermore, Johnson's approach appears to involve producing a semantic dictionary and comparing the semantic dictionary with summaries of medical article to locate a most preferred semantic type for a phrase, a word or a particular variant of a word. In addition, unlike Applicants' apparatus and method that initially builds a rule database based upon the databases derived from the UMLS, Johnson's "semantic preference rules" are generated using both the semantic lexicon and the corpus of discharge summaries.

Applicants further submit that the Office Action misapplies the teachings of Johnson. Specifically, in the last paragraph on page 2 of the Office Action, the Examiner respectively equates Johnson's terms "lexeme" and "semantic type" with Applicants' "single name" and "concept name" to conclude that the claimed databases are disclosed by Johnson. This is at least wrong in that the

"semantic type," as disclosed by Johnson corresponds to the classification of the meaning of some terms (See Page 211, Table 5), which is different from the Applicant's disclosed "concept name."

Furthermore, the Examiner wrongfully equates "variants" with "category keyterm." The "variants" includes different form of a word, e.g. suffocate, suffocates, suffocated, suffocating (*see* Page 211, Table 5), and such "variants" do not involve any part of the "category keyterm" (the claimed keyterm is a portion of the claimed concept name). In addition, such "variants" do not involve calculating distribution in the semantic category as recited in allowable claim 8. Thus, Johnson fails to disclose a resource constitution unit for constructing a concept name database, a single name database and a category keyterm database.

Accordingly, because Johnson fails to disclose, teach or suggest each and every limitation recited in claim 1, the rejection of claim 1 under 35 U.S.C. §102(b) is improper. Applicants respectfully submit, therefore, that independent claim 1 is patentable over Johnson. Claim 5, as amended, recites a method of for recognizing a biological named entity based upon the apparatus of claim 1. As presented above, Applicants respectfully submit that claim 1 is allowable over Johnson. Applicants therefore submit that claim 5 is likewise patentable over Johnson.

Claims 2-4, 9-12, and 13 depend variously from independent claims 1 and 5 and are likewise patentable over Johnson at least for their dependence on an allowable base claim, as well as for additional features they recite. Withdrawal of the rejection over Johnson is respectfully requested.

Regarding the rejection of claim 13 as obvious over Johnson in view of Veale, Applicants respectfully submit that Veale appears to only disclose a system for named entity extraction for answering natural language questions, and fails to remedy the deficiencies of Johnson in regards to a rule collection unit configured to generate rules used to recognize the named entity. Accordingly, claim 13 is likewise patentable over the asserted combination of Johnson and Veale.

New claim 15 is based upon subject matter in the originally recited claim 1 and is allowable over the asserted references at least for its dependence on claim 1.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-15 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,
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